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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,000	01/11/2001	Henry Sowizral	5181-69300	2767

7590 12/16/2005
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EXAMINER

VO, CLIFF N

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/760,000

Applicant(s)

SOWIZRAL ET AL.

Examiner

CLIFF N. VO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 is/are allowed.
- 6) ☒ Claim(s) 13-15, 17, 19, 20, 24-37 and 40-43 is/are rejected.
- 7) ☒ Claim(s) 16, 18, 21-23, 38 and 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Amendment filed March 15, 2004 which has been entered into the record of file.

Claim Rejections - 35 USC § 101

2. Claims 24-34 are rejected under 35 U.S.C. 101 because they simply recite "a method for managing data that is to be rendered" having steps which are not executed by a computer system. Thus, the claimed invention is directed to non-statutory subject matter.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 13-15, 17, 19-20, 24-27, 29, 31-32, 35-37 and 40-43 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over

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claims 1, 2, 4-5, 7-8 and 17 of the U.S. Patent No. 6,570,564. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons as follow.

As per independent claim 13 of the instant application, the U.S. Patent No. 6,570,564's claim 8 discloses a computer-readable medium comprising a computer program, wherein the computer program is executable by a computer (col.25, lines 7-10) to receive a scene graph comprising a plurality of graphical objects (col.25, lines 12-14), traverse the scene graph (col.25, line 16), generate a plurality of data structures corresponding to the scene graph, wherein at least one of the data structures is a render bin (col.5, lines 16-17, 36-37), determine which of a plurality of graphical objects are to be rendered (col.25, lines 36-39, i.e., "*references to particular geometry data that is to be rendered*"), create entries in the render bin that correspond to graphical objects that are to be rendered (col.25, lines 36-39, i.e., receiving messages that store, i.e. "create", the references to particular geometry data, i.e. "graphical objects", that are to be rendered in the render bin). It should be noticed that the patented claim 8 of the U.S. Patent No. 6,570,564 fails to explicitly teach submit the graphical objects listed in the render bin for rendering. Rather, the patented claim 8 teaches wherein the render bin has one or more render threads associated with it for rendering the geometry data (col.25, lines 40-43) listed in the render bin (col.25, lines 38-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the step of storing references to particular graphical objects that are to be rendered in the render bin of the patented claim 8 would have further included a step of

submitting references to particular graphical objects in the render bin, i.e., "list of graphical objects in the render bin", for rendering as now claimed since the patented claim 8 only renders "particular geometry data that is to be rendered in the render bin" at col.25, lines 38-43.

As per dependent claim 14, the patented claim 8 of the U.S. Patent No. 6,570,564 further teaches a step of rendering the graphical objects listed in the render bin (col.25, lines 41-42).

As per dependent claim 15, the patented claim 8 of the U.S. Patent No. 6,570,564 further teaches a step of generating a rendering thread, wherein the rendering thread is configured to render to contents of the render bin (col.25, lines 36-43).

As per dependent claim 17, the patented claim 8 of the U.S. Patent No. 6,570,564 further teaches wherein each data structure has a message queue configured to receive and store messages including data for updating the data structure (col.25, lines 36-39).

As per dependent claim 19, the patented claim 4 of the U.S. Patent No. 6,570,564 further teaches a step of updating the data structure (col.25, lines 28-30).

As per dependent claim 20, the patented claim 8 of the U.S. Patent No. 6,570,564 further teaches wherein the render bin has one or more render threads associated with it, each is configured to render the graphical data in the render bin (col.25, lines 40-44)

Claim 24 is similar to claim 13, it should be noticed that the patented claim 8 of the U.S. Patent No. 6,570,564 discloses a computer readable medium having a computer program stored therewith for performing all the steps as now claimed in the method claim 24 of the instant application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to reconfigure the computer program having a plurality of computer instructions as claimed in claim 8 of the U.S. Patent No. 6,570,564 to a method claim as now claimed in claim 24 of the instant application since it has had all the limitations and would have provided the same functions as now claimed.

As per dependent claim 25, the modified patented claim 8 of the U.S. Patent No. 6,570,564 further teaches wherein the data structures include geometry data, transform data and rendering environment data (col.25, lines 14-15).

As per dependent claim 26, the modified patented claim 7 of the U.S. Patent No. 6,570,564 further teaches a step of rendering the graphical objects having entries listed in the render bin (col.25, lines 36-39).

As per dependent claim 27, the modified patented claim 8 of the U.S. Patent No. 6,570,564 further teaches a step of generating a rendering thread for rendering the graphical objects listed in the render bin (col.25, lines 40-44).

As per dependent claim 29, the modified patented claim 8 of the U.S. Patent No. 6,570,564 further teaches wherein each data structure has a message queue configured to receive and store messages including data for updating the data structure (col.25, lines 36-39).

As per dependent claim 31, the modified patented claim 4 of the U.S. Patent No. 6,570,564 further teaches a step of updating the data structure (col.25, lines 28-30).

As per dependent claim 32, the modified patented claim 8 of the U.S. Patent No. 6,570,564 further teaches wherein the render bin has one or more render threads associated with it, each is configured to render the graphical objects having entries in the render bin (col.25, lines 40-44).

As per independent claim 35 of the instant application, the U.S. Patent No. 6,570,564's claim 8 discloses a computer-readable medium comprising a computer program, wherein the computer program is executable by a computer to receive a scene graph comprising a plurality of graphical objects in the virtual world, i.e. "three dimensional" and creating entries in the scene graph corresponding to the objects (col.25, lines 12-14), create a plurality of data structures each corresponds to a particular type of objects in the virtual world (col.5, lines 16-19), create entries in the data structures corresponding to the objects (col.25, lines 36-39, i.e., receive and store "*references to particular geometry data that is to be rendered*"), create at least one thread for each data structure (col.25, lines 36-37 and 40-41, i.e., one data structure is a render bin) and rendering the objects having entries in one of the data structure (col.25, lines 36-44). it should be noticed that the patented claim 8 of the U.S. Patent No. 6,570,564 discloses a computer readable medium having a computer program stored therewith for performing all the steps as now claimed in the method claim 35 of the instant application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to reconfigure the computer program having a plurality of

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computer instructions as claimed in claim 8 of the U.S. Patent No. 6,570,564 to a method claim as now claimed in claim 35 of the instant application since it has had all the limitations and would have provided the same functions as now claimed.

As per dependent claim 36, the modified patented claim 17 of the U.S. Patent No. 6,570,564 further teaches wherein the threads are configured to execute in parallel (col.25, lines 64-66).

As per dependent claim 37, the modified patented claim 8 of the U.S. Patent No. 6,570,564 further teaches wherein at least one of the data structures is a render bin (col.25, lines 36-37), and wherein one of the threads is a rendering thread (col.25, lines 40-44).

As per dependent claims 40-42, the modified patented claim 8 of the U.S. Patent No. 6,570,564 further teaches the features as now claimed at col.25, lines 15-16.

As per dependent claim 43, the modified patented claim 5 of the U.S. Patent No. 6,570,564 further teaches wherein at least one of the data structures is a behavior structure that stores entries relating to object behavior (col.25, lines 31-33).

Allowable Subject Matter

5. Claims 1-12 are allowed.
6. Claims 16, 18, 21-23 and 38-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter: none of the cited prior art shows an arrangement of the steps of receiving,

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generating, creating and generating multiple rendering threads in order to form a method for rendering graphics data as now claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLIFF N. VO whose telephone number is 571-272-7651. The examiner can normally be reached on 2nd Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLIFF N VO
Examiner
Art Unit 2676



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

